

# Arctic Network Inventory & Monitoring Program

U.S. Department of the Interior

**Data Management**  
**Standard Operating Procedure**  
NPS/ARCN/DMSOP-2009-07



## Exporting Spatial Data From SQL Server using ESRI ArcCatalog

### Summary

This document explains how to connect to a SQL Server database using ESRI ArcCatalog in order to extract data containing spatial coordinates.

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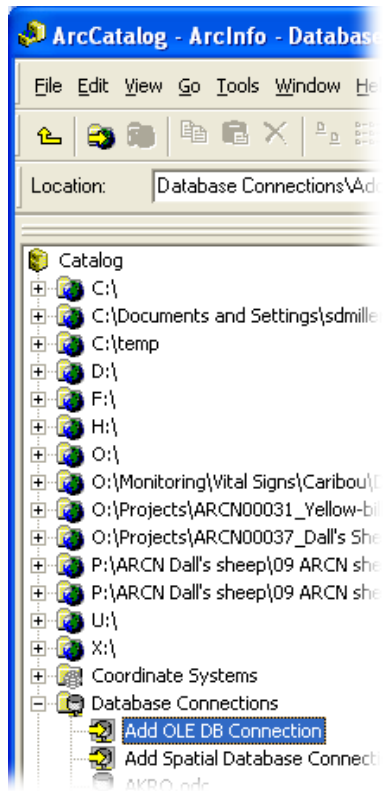
### Introduction

Tabular databases often contain spatial coordinates people commonly want to view such data with other spatial data layers in a Geographic Information System. This document demonstrates a simple method for extracting such coordinates into an ESRI Shapefile. This example exports caribou monitoring data from a Microsoft SQL Server database to a shapefile. Other data servers would work similarly.

### Connecting to SQL Server Using ArcCatalog

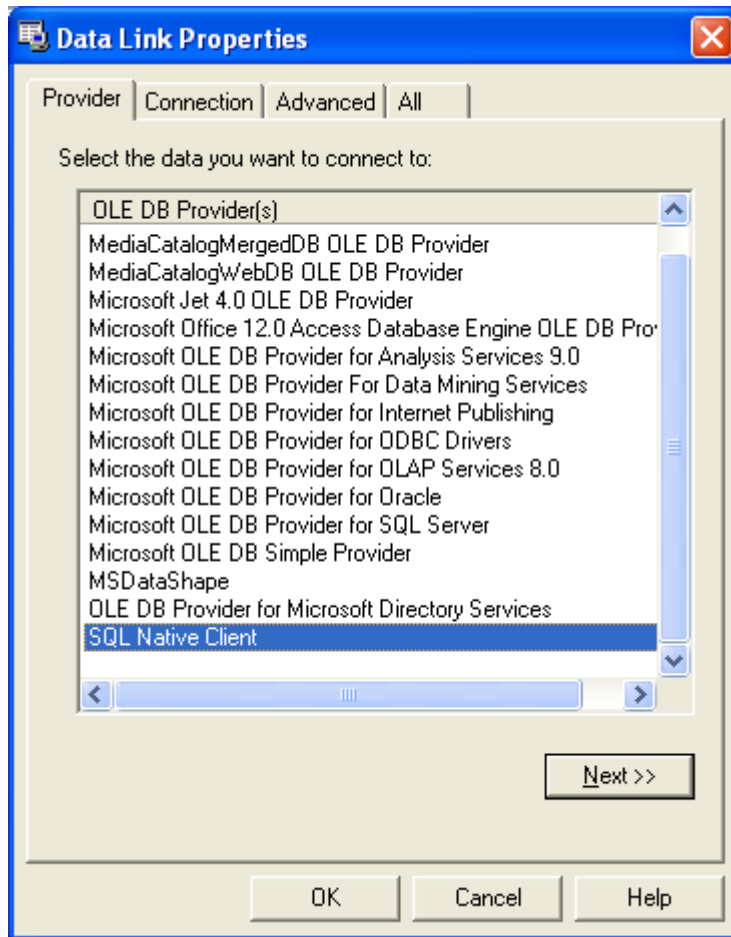
1. Start ArcCatalog
2. Select 'Database Connections' and then 'Add OLEDB Connection'.

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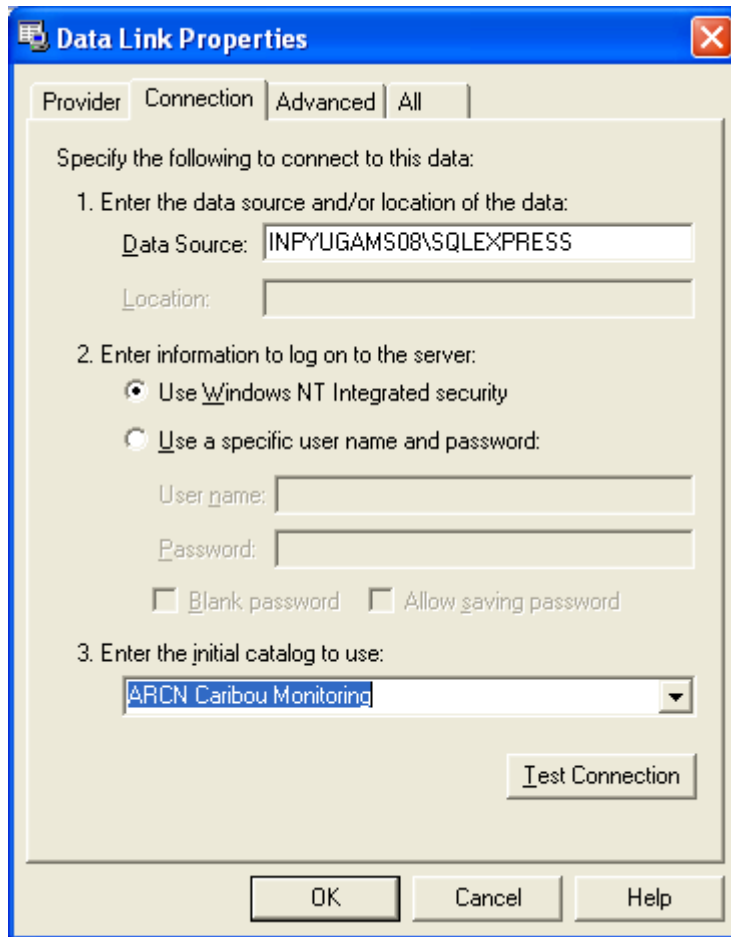
3. Under Data Link Properties select 'SQL Native Client'.

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4. Under Connection enter your SQL Server, authentication method and database.

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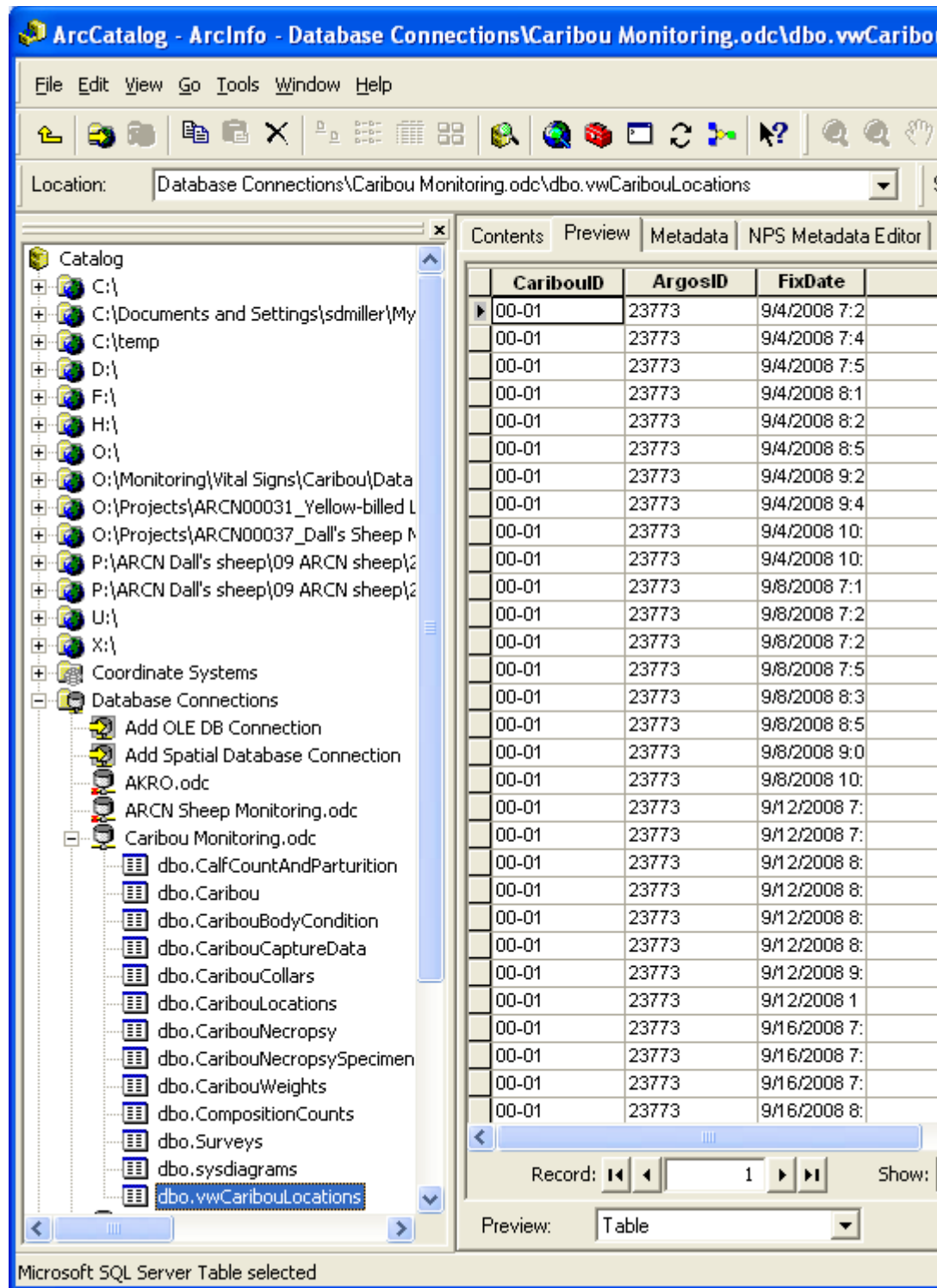
The screenshot shows the 'Data Link Properties' dialog box with the 'Advanced' tab selected. The dialog has four tabs: 'Provider', 'Connection', 'Advanced', and 'All'. The 'Advanced' tab contains the following fields and options:

- Specify the following to connect to this data:**
  - 1. Enter the data source and/or location of the data:**
    - Data Source:** INPYUGAMS08\SQLEXPRESS
    - Location:** (empty text box)
  - 2. Enter information to log on to the server:**
    - ☒ Use Windows NT Integrated security
    - ☐ Use a specific user name and password:
      - User name:** (empty text box)
      - Password:** (empty text box)
    - ☐ Blank password ☐ Allow saving password
  - 3. Enter the initial catalog to use:**
    - ARCN Caribou Monitoring (selected in dropdown)
- Test Connection** button

At the bottom of the dialog are three buttons: **OK**, **Cancel**, and **Help**.

5. Click OK
6. Open the database connection and select the table or database view that contains the spatial coordinates you would like to export.

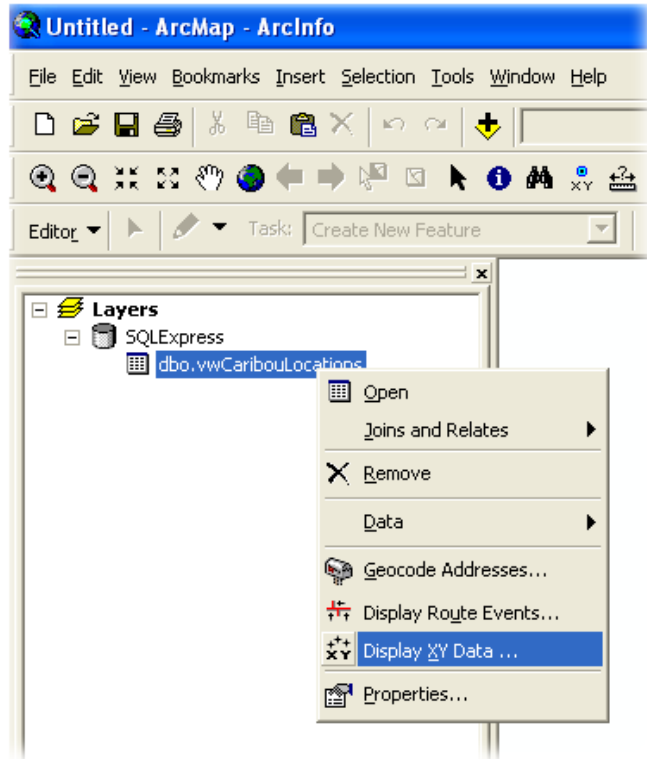
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## Adding XY Data to ArcMap

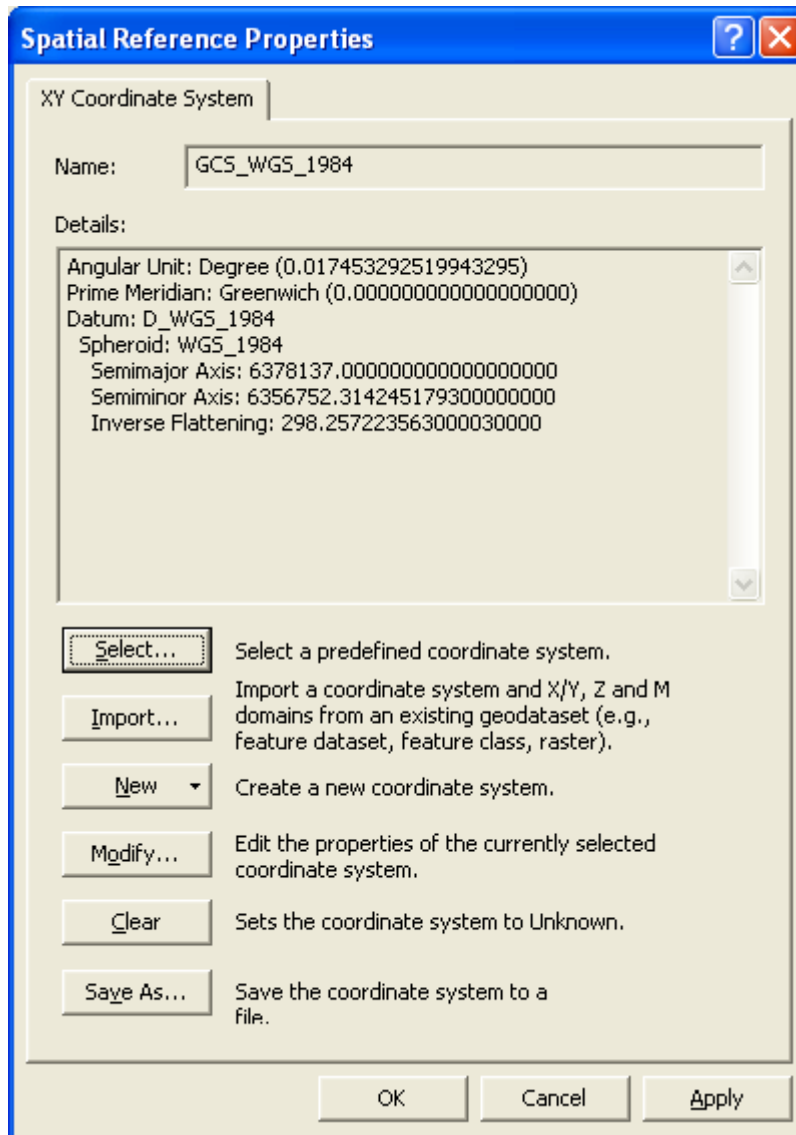
7. Drag the table into ArcMap.
8. Right click the table and select 'Display XY Data...'

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9. ArcMap will need the spatial reference system (ARCN generally uses WGS84 for GPS collected data).

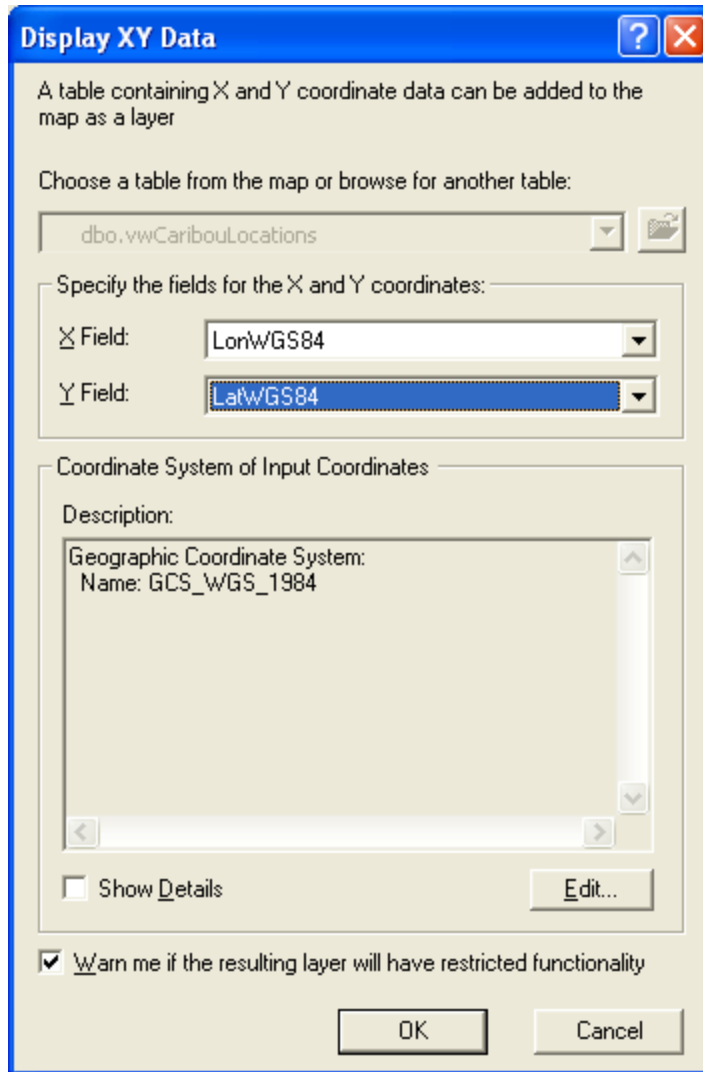
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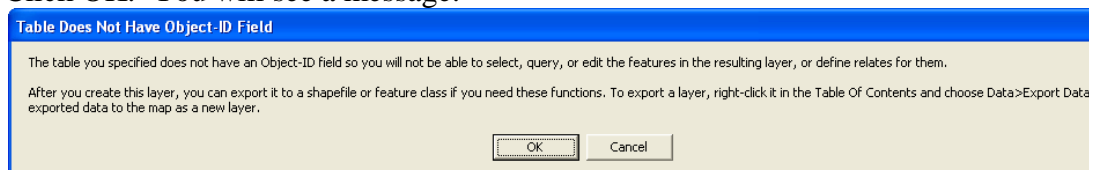
10. Click OK

11. Specify the coordinate fields.

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12. Click OK. You will see a message:

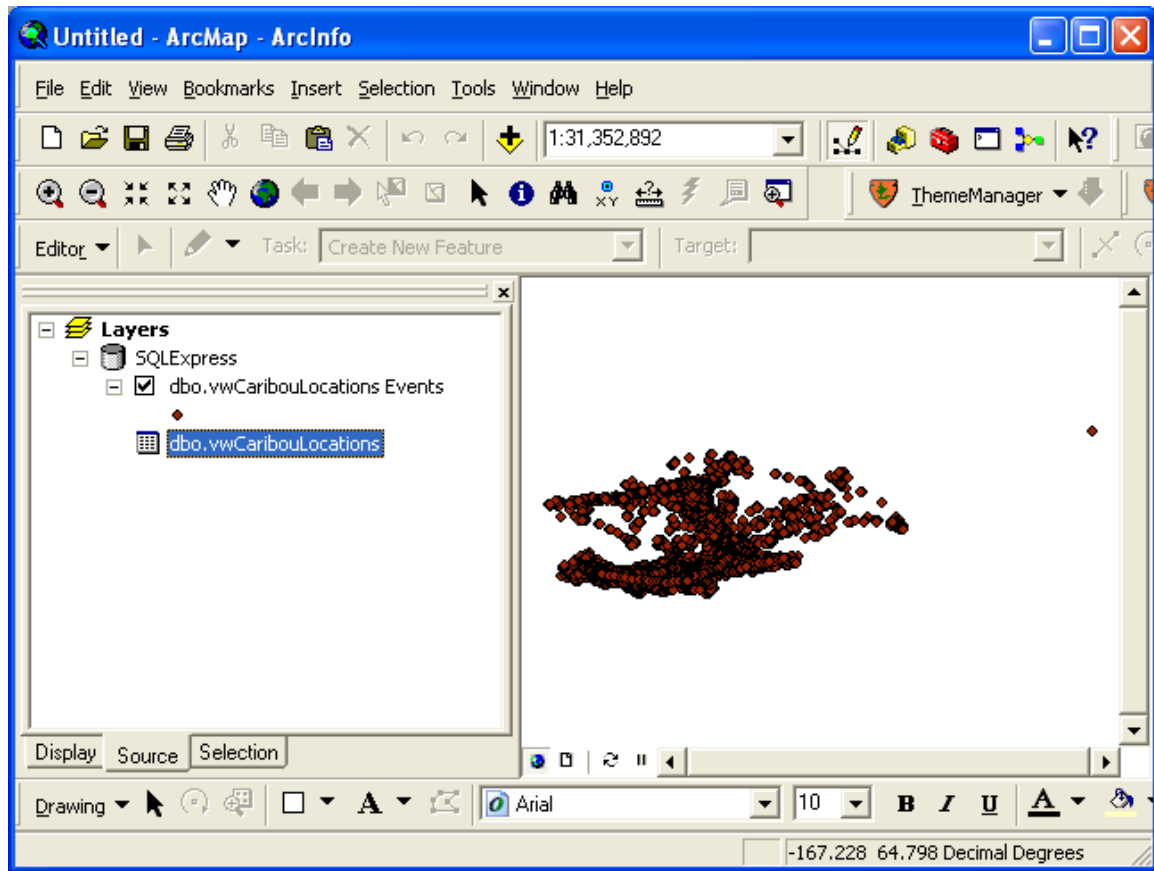


This message is warning you that the events layer you are creating will have limited querying abilities. This is OK since we are exporting the data to a shapefile anyway.

13. The data should appear.

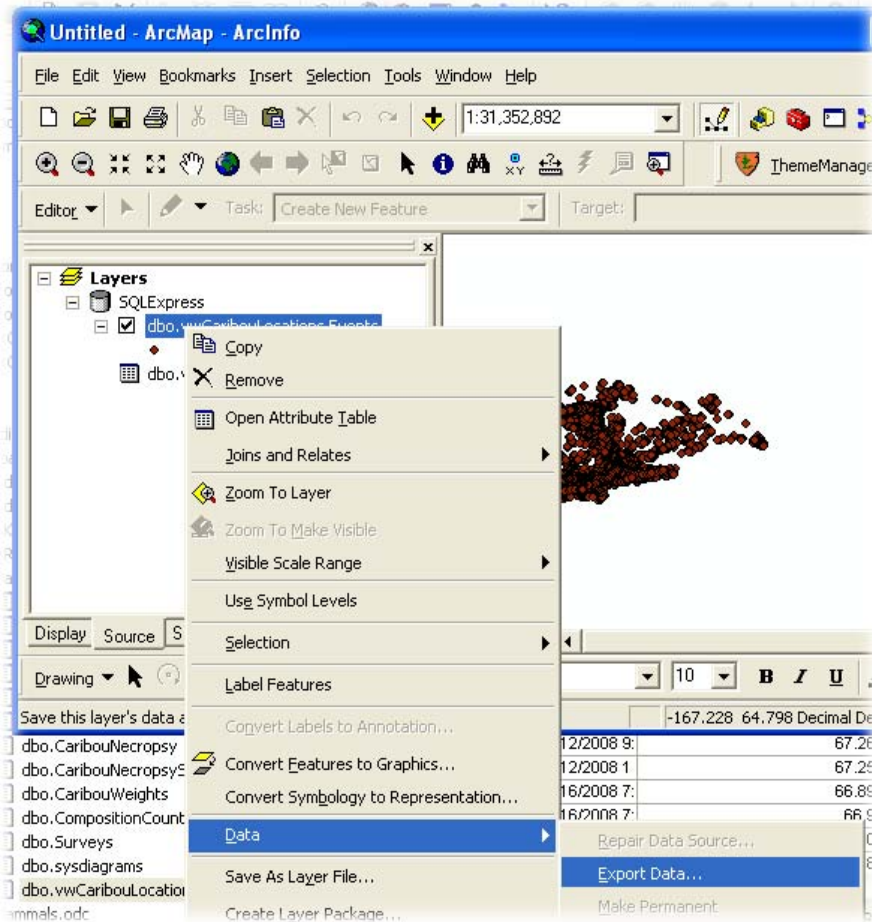
## Exporting the XY Events Layer to a Shapefile

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Right click the new events layer. Select 'Data' → Export Data.

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14. The Export Data dialog appears. Select an output file and click OK. Your shapefile is exported.

## About This Standard Operating Procedure

**Version:** 1.0

**Status:** Final

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**Author(s):** Scott D. Miller, Data Manager, Arctic Network Inventory & Monitoring Program.

**Abstract:** This document explains how to connect to a SQL Server database using ESRI ArcCatalog in order to extract data containing spatial coordinates.

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## Revision History

Version	Version Date	Revised By	Changes
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## Arctic Network Data Management Standard Operating Procedure

1.0	2009-05-07	S. Miller	Original

This table reflects changes to this document. Version numbers will be incremented by one (e.g., Version 1.3 to Version 2.0) each time there is a significant change in the process and/or changes are made that affect the interpretation of the data. Version numbers will be incremented after the decimal (e.g., Version 1.6 to Version 1.7...1.10...1.21) when there are changes to grammar, spelling, or formatting, or minor modifications in the process that do not affect the interpretation of data.